REMARKS

The Office Action mailed May 28, 2004 has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

A "Petition for Extension of Time" for extending the due date for responding to the Office Action by one month and a credit card payment form to cover the fee payment ($110.00) for the extension are filed with this Amendment. Authorization is granted to charge counsel's Deposit Account No. 01-2300, referencing **Attorney Docket No. 024016-00071**, for any additional fees necessary for entry of this Amendment.

Claims 20, 23 and 26 have been amended and claim 22 has been cancelled. New claims 33-40 have been added. Applicants submit that the amendments made and the new claims added herein are fully supported in the Specification and the drawings, as originally filed, and therefore no new matter has been introduced. Accordingly, claims 20-21, 23-26 and 32-40 are pending in the present application and are respectfully submitted for reconsideration.

Claims 20-26 and 32 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, the Examiner noted that the term "large" in independent claim 20 rendered the claim indefinite. Dependent claims 21-26 and 32 depend from independent claim 20. Claims 20, 23 and 26 have been amended in response to the Examiner's rejections. Claim 22 has been cancelled, thus the rejection with respect to claim 22 is now moot. The rejections are respectfully traversed and reconsideration is requested.

Claims 20, 21 and 26 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the Uemura patent (U.S. Patent No. 5,146,464). Dependent claims 21 and 26 depend from independent claim 20. The rejections are respectfully traversed and reconsideration is requested.

In the Office Action, the Examiner has indicated that dependent claims 22-25 and 32, objected to as being dependent upon a rejected base claim, would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and if rewritten or amended to overcome the rejections under 35 U.S.C. § 112, second paragraph. As noted above, claims 20, 23 and 26 have been amended to overcome the rejections under 35 U.S.C. § 112, second paragraph. Independent claim 20 has been further amended to include the content of dependent claim 22, and claim 22 has accordingly been canceled. It is therefore submitted that independent claim 20 is therefore patentable and in condition for allowance and that dependent claims 21, 24-25 and 32 and amended dependent claims 23 and 26 depending from independent claim 20 are also patentable and in condition for allowance. Reconsideration is respectfully requested.

Claims 33-40 have been added. Dependent claims 34-40 depend from independent claim 33. Entry of the newly added claims is respectfully requested.

The Uemura patent relates to a semiconductor laser driver circuit which drives a light source by superimposing a high frequency current on a direct current. Specifically, with reference to Fig. 1, laser is emitted when direct current by a driver circuit 12 and high frequency current by a high frequency power supply 10 are supplied to a semiconductor laser 1. The semiconductor laser 1 is driven depending on a square-wave test pulse T_P and the peak voltage obtained as current voltage in accordance with irradiated light is recorded, whereby laser power is adjusted.

The present invention relates to a current pulse receiving circuit that converts an input current pulse to a corresponding logic level voltage pulse and outputs the voltage pulse with an accurate pulse width. More particularly, the invention relates to a current pulse receiving circuit used, in optical communication and similar application fields, after a received light pulse is converted to a corresponding current pulse by a photodetector. When the "large" (predetermined amplitude) signal detection circuit detects that voltage amplitude of the voltage pulse converted from input current pulse by the current-to-voltage converter circuit is equal to or greater than a predetermined amplitude, the clamp circuit (gain conversion section) reduces the clamp level of the output voltage amplitude, while at the same time reducing current-to-voltage conversion resistance in the current-to-voltage converter circuit. Since output voltage amplitude is restricted to a small level for an input current pulse of a large amplitude, the tail waveform in an output voltage signal presents no problem. The trailing edge of an input current pulse of a large amplitude can be accurately detected, thus realizing an output of a pulse width with high accuracy. Applicants respectfully submit that the current pulse receiving circuit recited in independent claim 33 is neither disclosed nor suggested by the Uemura patent.

Specifically, in the Uemura patent, laser power is adjusted by recording clamp voltage obtained from the response of a semiconductor laser to a square-wave test pulse. The electrical signal produced by a photodetector 5 from the light output from the semiconductor laser 1 driven by the test pulse T_P is recorded for an upper peak value and a bottom peak value of the output voltage corresponding to the laser output level in response to the test pulse T_P which are then output and differentially amplified. The inclination of differential quantization efficiency η of the semiconductor laser 1 is found in accordance with the difference between the peak values. Then, the output signal related to the obtained differential quantization efficiency η is applied to the high frequency current control circuit 15. When the slope of the differential quantization efficiency η is smaller than a predetermined slope, the high frequency current control circuit 15 increases the high frequency current and when the slope is larger than the predetermined slope, circuit 15 decreases the high frequency current, thus varying the high frequency current flowing into the semiconductor laser 1. As a result, it is possible to prevent noise generated by a change of light output which is caused by reflected light and to prevent unnecessary electromagnetic wave radiation caused by too much high frequency current. (col. 6, l. 36 -- col. 7, l. 14)

In contrast, in the present invention, when the output voltage pulse is the same as or lower than a predetermined amplitude, current-to-voltage conversion resistance at the current-to-voltage converter circuit is kept at a predetermined value and the output voltage pulse is adjusted with reference to input current pulse responses with predetermined gain (resistance value). When the output voltage pulse is the same as or higher than the predetermined amplitude, current-to-voltage conversion resistance at the current-to-voltage converter circuit is reduced from the predetermined value and the gain of the output voltage pulse is adjusted with reference to the input current pulse responses in logarithmic function.

Accordingly, it is respectfully submitted that the Uemura patent does not disclose or suggest the current pulse receiving circuit, as claimed in the present invention. Based upon the forgoing, Applicants respectfully submit that each and every element recited within independent claim 33 is neither disclosed nor suggested by the Uemura patent, and claim 33 is therefore patentable and in condition for allowance. Reconsideration is requested.

It is further submitted that dependent claims 34-40 are also patentable and in condition for allowance due to their dependency upon independent claim 33, since the dependent claims differ in scope from the parent claim. Dependent claims 34-40 depend from independent claim 33, and thus are further limited to additional features of the invention. Therefore, it is respectfully submitted that the dependent claims are patentable over the Uemura patent for at least the reasons set forth above with respect to independent claim 33. Reconsideration is requested.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact the Applicants' undersigned counsel at the telephone number, indicated below, to arrange for an interview to expedite the disposition of this application.

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Respectfully submitted,

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